

LISTINGS OF CLAIMS

Please amend the following claims as indicated.

1-5. (Canceled)

6. (Previously presented) A mechanical chassis apparatus including a non-contact reading mechanism for a disc recording medium and a vibration preventing damper attached on a chassis member supported in a floating condition through the vibration preventing damper within a casing, comprising:

the vibration preventing damper having a damper housing made of a resin material, provided with a holder portion in a form of a container opened at one end for inserting a support shaft provided in the casing and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions, and

the chassis member having a resin hole edge covering portion for covering a hole edge of a through hole formed in the chassis member with both front and rear surfaces of the chassis member,

wherein the opening side end portion of the damper housing is fixed to said resin hole edge covering portion on one side surface of the chassis member and a lid member made of a resin material is fixed to said resin hole edge covering portion on the other side surface of the chassis member, so that said resin hole edge covering portion at the chassis member is forming a portion of the vibration preventing damper, and said vibration preventing damper is formed integrally with said chassis member without using mechanical fasteners.

7-14. (Canceled)

15. (Previously presented) A mechanical chassis apparatus including a non-contact reading mechanism for a disc recording medium and a vibration preventing damper attached on a chassis member supported in a floating condition through a vibration preventing damper within a casing, comprising:

the vibration preventing damper having an opening side end portion of a damper housing made of a resin material, a holder portion in a form of a container opened at one end for inserting a support shaft provided in the casing, and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions,

the chassis member comprising a metal portion in which said non-contact reading mechanism is provided and a resin portion in which a through hole is included and is formed integrally with said metal portion,

wherein a through hole is provided in the vibration preventing damper forming portion of a resin portion of said chassis member, and

wherein the opening side end portion of the damper housing is fixed to a hole edge of the through hole on one side surface of the chassis member, and a lid member made of a resin material for closing the through hole is fixed to the hole edge of the through hole on the other side surface of the chassis member, so that a resin hole edge covering portion at the chassis member is forming a portion of the vibration preventing damper, and said vibration preventing damper is formed integrally with said chassis member without using mechanical fasteners.

16. (Currently Amended) A mechanical chassis apparatus including a non-contact reading mechanism for a disc recording medium and a vibration preventing damper attached on a chassis member supported in a floating condition through the vibration preventing damper within a casing, comprising:

the vibration preventing damper having a damper housing made of a resin material provided with a holder portion in a form of a container opened at one end for inserting a support shaft provided in the casing and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions, said damper housing providing an outward flange on an opening side end portion, and

the chassis member comprising a metal portion in which said non-contact reading mechanism is provided and a resin portion in which a through hole is ~~included and is~~ formed ~~integrally with said metal portion,~~

wherein the one side surface of the outward flange comes in contact with a hole edge of the through hole, the damper housing is fixed to said chassis member and a lid member made of a resin material for closing the opening side end portion of the damper housing is fixed to the other side surface of the outward flange, so that ~~said resin portion at the chassis member is forming a portion of the vibration preventing damper,~~ and said vibration preventing damper is formed integrally with said chassis member without using mechanical fasteners.

17-22. (Canceled)

23. (Previously presented) A vibration preventing damper and chassis assembly, comprising:

a chassis member; and

a vibration preventing damper attached to the chassis member as an integral construction without mechanical fasteners,

wherein the chassis member is fabricated from metal and has a through hole formed therethrough and the vibration preventing damper includes a damper housing having an elastic wall portion formed with an internal agitating sleeve and fabricated from a thermoplastic

elastomer, a resin portion fabricated from resin and integrally connected to the chassis member forming a ring covering at least an inner periphery of the through hole, a lid member fabricated from resin and a viscous fluid contained in the vibration preventing damper and in contact with the internal agitating sleeve, the elastic wall portion is integrally connected to the resin portion on one side of the chassis member and the lid member is integrally connected to the resin portion on an opposite side of the chassis member in a manner such that the elastic wall portion and the lid member are isolated from contact with the chassis member.

24-26. (Canceled)

27. (Currently Amended) A vibration preventing damper forming method for supporting in a vibration proof manner a mechanical chassis apparatus provided with a non-contact reading mechanism for a disc recording medium in a floating manner within a casing, a vibration preventing damper being formed integrally with the casing or the mechanical chassis apparatus, ~~characterized by the method~~ comprising the steps of:

preparing a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft provided in one of the casing and the mechanical chassis apparatus, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material, and preparing a cover plate formed of a resin material; and

regarding the other of the casing and the mechanical chassis apparatus, forming a through hole that passes through the plate thickness in a metal portion that forms the vibration preventing damper and forming an annular resin portion that covers hole edges of the through hole at both front and rear surfaces,

~~characterized in that~~ wherein an opening of the damper housing is fixed to the annular resin portion on one surface side of the other of the casing and the mechanical chassis

apparatus, and the cover plate is fixed to the annular resin portion of the other surface side, thereby closing an inner portion space that is formed by both the damper housing and the through hole, and integrally forming the vibration preventing damper with the casing or the mechanical chassis apparatus.

28. (Currently Amended) A mechanical chassis apparatus comprising:

a chassis member having a non-contact reading mechanism for a disc recording medium, a metal plate, in which a through hole is formed in a vibration preventing damper forming portion, and an annular resin portion that covers a hole inside and hole edges of the through hole at both front and rear surfaces;

a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft that is provided projecting into a casing that houses the chassis member, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material; and

a cover plate formed of a resin material,

~~characterized in that~~ wherein a vibration preventing damper, in which an inner portion space of the damper housing formed by an inner circumferential surface of the annular resin portion is closed by the cover plate, is formed integrally with the chassis member by fixing the opening side end portion of the damper housing to the annular resin portion on one surface side of the chassis member, and fixing the cover plate to the annular resin portion in another surface side of the chassis member.

29. (Currently Amended) A vibration preventing damper forming method for supporting in a vibration proof manner a mechanical chassis apparatus provided with a non-contact reading mechanism for a disc recording medium in a floating manner within a casing, a

vibration preventing damper being formed integrally with the casing or the mechanical chassis apparatus, ~~characterized by the method~~ comprising the steps of:

preparing a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft provided in one of the casing and the mechanical chassis apparatus, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material, and preparing a cover plate formed of a resin material; and

regarding the other of the casing and the mechanical chassis apparatus, forming a through hole that passes through the plate thickness of a portion that forms the vibration preventing damper,

~~characterized in that~~ wherein an opening of the damper housing is fixed to a hole edge of the through hole on one surface side of the other of the casing and the mechanical chassis apparatus, and the cover plate is fixed to a hole edge of the through hole on another surface side, thereby closing an inner portion space that is formed by both the damper housing and the through hole, and integrally forming the vibration preventing damper with the casing or the mechanical chassis apparatus.

30. (Canceled)

31. (Currently Amended) A vibration preventing damper forming method according to claim 29, ~~for supporting in a vibration proof manner a mechanical chassis apparatus provided with a non-contact reading mechanism for a disc recording medium in a floating manner within a casing, the vibration preventing damper being formed integrally with the casing or the mechanical chassis apparatus, characterized by comprising the steps of:~~

~~preparing a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft provided in one of the casing and the mechanical chassis apparatus, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material, and preparing a cover plate formed of a resin material; and~~

~~regarding the other of the casing and the mechanical chassis apparatus, forming a through hole that passes through a plate thickness of a portion that forms the vibration preventing damper,~~

~~characterized in that wherein the an opening of the damper housing is fixed to a hole edge of the through hole through an ultrasonic wave heat bonding on one surface side, and the cover plate is fixed to a hole edge of the through hole on another surface side, thereby closing an inner portion space that is formed by both the damper housing and the through hole, and integrally forming the vibration preventing damper with the casing or the mechanical chassis apparatus.~~

32. (Canceled)

33. (Currently Amended) A mechanical chassis apparatus according to ~~any one of claim 28~~ claim 6, wherein the holder portion of the damper housing is formed as a bottomed agitating shaft portion for holding the support shaft provided in the casing and viscous fluid for giving an agitating resistance due to viscous fluidization to the agitating shaft portion that moves in accordance with the movement of the support shaft is provided within an interior of the vibration preventing damper.

34. (Canceled)

35. (New) A mechanical chassis apparatus according to claim 15, wherein the holder portion of the damper housing is formed as a bottomed agitating shaft portion for holding the support shaft provided in the casing and viscous fluid for giving an agitating resistance due to viscous fluidization to the agitating shaft portion that moves in accordance with the movement of the support shaft is provided within an interior of the vibration preventing damper.

36. (New) A mechanical chassis apparatus according to claim 16, wherein the holder portion of the damper housing is formed as a bottomed agitating shaft portion for holding the support shaft provided in the casing and viscous fluid for giving an agitating resistance due to viscous fluidization to the agitating shaft portion that moves in accordance with the movement of the support shaft is provided within an interior of the vibration preventing damper.

37. (New) A mechanical chassis apparatus according to claim 23, wherein the holder portion of the damper housing is formed as a bottomed agitating shaft portion for holding the support shaft provided in the casing and viscous fluid for giving an agitating resistance due to viscous fluidization to the agitating shaft portion that moves in accordance with the movement of the support shaft is provided within an interior of the vibration preventing damper.

38. (New) A mechanical chassis apparatus according to claim 28, wherein the holder portion of the damper housing is formed as a bottomed agitating shaft portion for holding the support shaft provided in the casing and viscous fluid for giving an agitating resistance due to viscous fluidization to the agitating shaft portion that moves in accordance with the movement of the support shaft is provided within an interior of the vibration preventing damper.